

ABSTRACT

A Radio Frequency (RF) receiver includes a low noise amplifier (LNA) and a mixer coupled to the output of the LNA. The gain of the LNA is adjusted to maximize signal-to-noise ratio of the mixer and to force the mixer to operate well within its linear region when an intermodulation interference component is present. The RF receiver includes a first received signal strength indicator (RSSI_A) coupled to the output of the mixer that measures the strength of the wideband signal at that point. A second received signal strength indicator (RSSI_B) couples after the BPF and measures the strength of the narrowband signal. The LNA gain is set based upon these signal strengths. By altering the gain of the LNA by one step and measuring the difference between a prior RSSI_B reading and a subsequent RSSI_B' reading will indicate whether intermodulation interference is present.